IN 10 70 TO SEQUENCE LISTING

<110> HOEFFLER, JAMES TRADE RUSSELL, MARIJANE

<120> SINGLE CHAIN ANTIBODY FUSION REAGENTS THAT REGULATE TRANSCRIPTION IN VIVO

<130> 039322/0226

<140> 09/939,769

<141> 2001-08-28

<150> 08/728,890

<151> 1996-10-10

<160> 96

<170> PatentIn Ver. 2.1

<210> 1

<211> 29

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Illustrative mitochondrial target signal

<400> 1

Met Ser Val Leu Thr Pro Leu Leu Leu Arg Gly Leu Thr Gly Ser Ala
1 5 10 15

Arg Arg Leu Pro Val Pro Arg Ala Lys Ile His Ser Leu 20 25

<210> 2

<211> 20

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Illustrative
 mitochondrial target signal

<400> 2

Met Glu Thr Asp Leu Leu Leu Trp Val Leu Leu Leu Trp Val Pro Gly
1 5 10 15

Ser Thr Gly Asp

20

<210> 3

<211> 24

<212> DNA <213> Artificial Sequence

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<220>
<223> Description of Artificial Sequence: Primer
<400> 3
tggaagaggc acgttctttt cttt
                                                                    24
<210> 4
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<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: Primer
<400> 4
gtccaccttg gtgttgctgg gctt
                                                                    24
<210> 5
<211> 24
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: Primer
<400> 5
agactctccc ctgttgaagc tctt
                                                                    24
<210> 6
<211> 27
<212> DNA
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<400> 6
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tgaagattct gtaggggcca ctgtctt
<210> 7
<211> 23
<212> DNA
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<223> Description of Artificial Sequence: Primer
<400> 7
caggtgcagc tggtgcagtc tgg
                                                                    23
<210> 8
<211> 23
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<212> DNA
<213> Artificial Sequence
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<223> Description of Artificial Sequence: Primer
<400> 8
caggtgcagc tggtggagtc tgg
                                                                    23
<210> 9
<211> 23
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Primer
<400> 9
caggtccagc ttgtgcagtc tgg
                                                                    23
<210> 10
<211> 23
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: Primer
<400> 10
caggtcacct tgaaggagtc tgg
                                                                    23
<210> 11
<211> 23
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: Primer
<400> 11
cagatcacct tgaaggagtc tgg
                                                                    23
<210> 12
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<212> DNA
<213> Artificial Sequence
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<400> 12
caggtgcagc tggtggagtc tgg
                                                                    23
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<210> 13
<211> 23
<212> DNA
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<223> Description of Artificial Sequence: Primer
<400> 13
caggtgcagc tgttgcagtc tgg
                                                                    23
<210> 14
<211> 23
<212> DNA
<213> Artificial Sequence
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<223> Description of Artificial Sequence: Primer
<400> 14
caggtgcagc tgttgcagtc tgc
                                                                    23
<210> 15
<211> 23
<212> DNA
<213> Artificial Sequence
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<400> 15
gaggtgcagc tggtgcagtc tgg
                                                                    23
<210> 16
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<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: Primer
<400> 16
gaggtgcagc tgttggagtc tgg
                                                                    23
<210> 17
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<400> 17
caggtacagc tgcagcagtc agg
                                                                    23
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<210> 18
<211> 54
<212> DNA
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<223> Description of Artificial Sequence: Primer
<400> 18
gtcctcgcaa ctgcggccca gccggccatg gcccaggtgc agctggtgca gtct
                                                                   54
<210> 19
<211> 56
<212> DNA
<213> Artificial Sequence
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<223> Description of Artificial Sequence: Primer
<400> 19
gtcctcgcaa ctgcggccca gccggccatg gcccaggtgc agctggtgga gtctgg
                                                                   56
<210> 20
<211> 56
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: Primer
<400> 20
gtcctcgcaa ctgcggccca gccggccatg gcccaggtcc agcttgtgca gtctgg 56
<210> 21
<211> 56
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: Primer
<400> 21
gtcctcgcaa ctgcggccca gccggccatg gcccaggtca ccttgaagga gtctgg 56
<210> 22
<211> 56
<212> DNA
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<220>
<223> Description of Artificial Sequence: Primer
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<400> 22
gtcctcgcaa ctgcggccca gccggccatg gcccagatca ccttgaagga gtctgg
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<210> 23
<211> 56
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Primer
<400> 23
gtcctcgcaa ctgcggccca gccggccatg gccgaggtgc agctggtgga gtctgg
<210> 24
<211> 56
<212> DNA
<213> Artificial Sequence
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<223> Description of Artificial Sequence: Primer
<400> 24
gtcctcgcaa ctgcggccca gccggccatg gcccaggtgc agctgcagga gtcggg
                                                                   56
<210> 25
<211> 56
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: Primer
<400> 25
gtcctcgcaa ctgcggccca gccggccatg gccgaggtgc agctgttgca gtctgc
                                                                   56
<210> 26
<211> 56
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Primer
<400> 26
gtcctcgcaa ctgcggccca gccggccatg gccgaggtgc agctggtgca gtctgg
<210> 27
<211> 56
<212> DNA
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<220>
<223> Description of Artificial Sequence: Primer
<400> 27
gtcctcgcaa ctgcggccca gccggccatg gccgaggtgc agctgttgga gtctgg
                                                                    56
<210> 28
<211> 56
<212> DNA
<213> Artificial Sequence
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<223> Description of Artificial Sequence: Primer
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gtcctcgcaa ctgcggccca gccggccatg gcccaggtcc agctgcagca gtcagg
                                                                    56
<210> 29
<211> 24
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: Primer
<400> 29
tgaggagacg gtgaccaggg tgcc
                                                                    24
<210> 30
<211> 24
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Primer
<400> 30
tgaggagaca gtgaccaggg tgcc
                                                                    24
<210> 31
<211> 24
<212> DNA
<213> Artificial Sequence
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<223> Description of Artificial Sequence: Primer
<400> 31
tgaagagacg gtgaccattg tccc
                                                                    24
<210> 32
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<211> 24

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<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Primer
<400> 32
                                                                    24
tgaggagacg gtgaccaggg tccc
<210> 33
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<212> DNA
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<220>
<223> Description of Artificial Sequence: Primer
<400> 33
tgaggagacg gtgaccaggg ttcc
                                                                    24
<210> 34
<211> 24
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: Primer
<400> 34
tgaggagacg gtgaccgtgg tccc
                                                                    24
<210> 35
<211> 36
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: Primer
<400> 35
gagtcattct cgtgtcgtca cggtgaccag ggtgcc
                                                                    36
<210> 36
<211> 36
<212> DNA
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<223> Description of Artificial Sequence: Primer
<400> 36
gagtcattct cgtgtcgaca cagtgaccag ggtgcc
                                                                    36
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<220>
<223> Description of Artificial Sequence: Primer
<400> 37
gagtcattct cgtgtcgaca cggtgaccat tgtccc
                                                                    36
<210> 38
<211> 36
<212> DNA
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<223> Description of Artificial Sequence: Primer
<400> 38
gagtcattct cgtgtcgaca cggtgaccag ggtccc
                                                                    36
<210> 39
<211> 36
<212> DNA
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<223> Description of Artificial Sequence: Primer
<400> 39
gagtcattct cgtgtcgaca cggtgaccag ggttcc
                                                                    36
<210> 40
<211> 36
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Primer
<400> 40
gagtcattct cgtgtcgaca cggtgaccgt ggtccc
                                                                    36
<210> 41
<211> 23
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: Primer
<400> 41
gacatccaga tgacccagtc tcc
                                                                    23
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<210> 42
<211> 23
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Primer
<400> 42
gatattgtga tgacccagwc tcc
                                                                    23
<210> 43
<211> 23
<212> DNA
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<223> Description of Artificial Sequence: Primer
<400> 43
gaaattgtgy tgacwcagtc tcc
                                                                    23
<210> 44
<211> 23
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: Primer
<400> 44
gacatcgtga tgacccagtc tcc
                                                                    23
<210> 45
<211> 23
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: Primer
<400> 45
gaaacgacac tcacgcagtc tcc
                                                                    23
<210> 46
<211> 23
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: Primer
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<400> 46
gagattgtga tgacccagac tcc
                                                                    23
<210> 47
<211> 23
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Primer
<400> 47
gaccacgtga tgacccagtc tcc
                                                                    23
<210> 48
<211> 41
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: Primer
tgagcacaca gtgcactcga catccagatg acccagtctc c
                                                                    41
<210> 49
<211> 41
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: Primer
<400> 49
tgagcacaca gtgcactcga tattgtgatg acccagwctc c
                                                                    41
<210> 50
<211> 41
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: Primer
<400> 50
tgagcacaca gtgcactcga aattgtgytg acwcagtctc c
                                                                    41
<210> 51
<211> 41
<212> DNA
<213> Artificial Sequence
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<223> Description of Artificial Sequence: Primer
<400> 51
tgagcacaca gtgcactcga catcgtgatg acccagtctc c
                                                                    41
<210> 52
<211> 41
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: Primer
<400> 52
tgagcacaca gtgcactcga aacgacactc acgcagtctc c
                                                                    41
<210> 53
<211> 41
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: Primer
tgagcacaca gtgcactcga gattgtgatg acccagactc c
                                                                    41
<210> 54
<211> 41
<212> DNA
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<223> Description of Artificial Sequence: Primer
tgagcacaca gtgcactcga ccacgtgatg acccagtctc c
                                                                    41
<210> 55
<211> 24
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Primer
<400> 55
acgtttgaty tccascttgg tccc
                                                                    24
<210> 56
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<211> 24

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<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Primer
<400> 56
acgtttgata tccactttgg tccc
                                                                    24
<210> 57
<211> 24
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Primer
<400> 57
acgtttaatc tccagtcgtg tccc
                                                                    24
<210> 58
<211> 48
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: Primer
<400> 58
gagtcattct cgacttgcgg ccgcacgttt gatytccasc ttggtccc
                                                                    48
<210> 59
<211> 48
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: Primer
<400> 59
gagtcattct cgacttgcgg ccgcacgttt gatatccact ttggtccc
                                                                    48
<210> 60
<211> 48
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: Primer
<400> 60
gagtcattct cgacttgcgg ccgcacgttt aatctccagt cgtgtccc
                                                                    48
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<210> 61
<211> 23
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Primer
<400> 61
cagtctgtgy tgackcagcc gcc
                                                                    23
<210> 62
<211> 23
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: Primer
<400> 62
ctgtgctgac kcagccrccc tca
                                                                    23
<210> 63
<211> 23
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: Primer
<400> 63
cagtctgccc tgactcagcc tgc
                                                                    23
<210> 64
<211> 23
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Primer
<400> 64
cagactgtgg tgacccagga gcc
                                                                    23
<210> 65
<211> 23
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: Primer
<400> 65
tcctctgagc tgagtcagca gcc
                                                                    23
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<210> 66
<211> 23
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Primer
<400> 66
caggctgtgg tgactcagga gcc
                                                                    23
<210> 67
<211> 23
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: Primer
<400> 67
ctgtggtgac ccaggagcca tca
                                                                    23
<210> 68
<211> 23
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: Primer
<400> 68
cagcctgtgc tgactcagcc acc
                                                                    23
<210> 69
<211> 23
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: Primer
<400> 69
cctatgagct gactcagcca ctc
                                                                    23
<210> 70
<211> 41
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: Primer
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<400> 70 tgagcacaca gtgcactcca gtctgtgytg ackcagccgc c	41
<210> 71	
<211> 41	
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<223> Description of Artificial Sequence: Primer	
<400> 71	
tgagcacaca gtgcactcct gtgctgackc agccrccctc a	41
<210> 72	
<211> 41	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Description of Artificial Sequence: Primer	
<400> 72	
tgagcacaca gtgcactcca gtctgccctg actcagcctg c	41
<210> 73	
<211> 41	
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<223> Description of Artificial Sequence: Primer	
<400> 73	
tgagcacaca gtgcactcca gactgtggtg acccaggagc c	41
<210> 74	
<211> 41	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Description of Artificial Sequence: Primer	
<400> 74	
tgagcacaca gtgcactctc ctctgagctg agtcagcagc c	41
<210> 75	
<211> 41	
<212> DNA	
<213> Artificial Sequence	

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<223> Description of Artificial Sequence: Primer
<400> 75
tgagcacaca gtgcactcca ggctgtggtg actcaggagc c
                                                                    41
<210> 76
<211> 41
<212> DNA
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<220>
<223> Description of Artificial Sequence: Primer
<400> 76
tgagcacaca gtgcactcct gtggtgaccc aggagccatg a
                                                                    41
<210> 77
<211> 41
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: Primer
tgagcacaca gtgcactcca gcctgtgctg actcagccac c
                                                                    41
<210> 78
<211> 41
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Primer
tgagcacaca gtgcactccc tatgagctga ctcagccact c
                                                                    41
<210> 79
<211> 24
<212> DNA
<213> Artificial Sequence
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<223> Description of Artificial Sequence: Primer
<400> 79
acctaggacg gtgaccttgg tccc
                                                                    24
<210> 80
<211> 24
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<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: Primer
<400> 80
acctaggacg gtcagctygg tccc
                                                                   24
<210> 81
<211> 24
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Primer
<400> 81
acctaaaatg atcagctggg ttcc
                                                                    24
<210> 82
<211> 24
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: Primer
<400> 82
accgaggacg gtcaccttgg tggc
                                                                    24
<210> 83
<211> 42
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: Primer
<400> 83
gagtcattct cgacttgcgg ccgcacctag gacctyggtc cc
                                                                    42
<210> 84
<211> 48
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: Primer
<400> 84
gagtcattct cgacttgcgg ccgcacctag gacggtcagc ttggtccc
                                                                    48
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<210> 85
<211> 48
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: Primer
<400> 85
gagtcattct cgacttgcgg ccgcacctaa aatgatcagc tgggttcc
                                                                    48
<210> 86
<211> 48
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Primer
<400> 86
gagtcattct cgacttgcgg ccgcaccgag gacggtcagg ttggtggc
                                                                    48
<210> 87
<211> 38
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Primer
<400> 87
agtggcccag ccggccaaat tcaagttaca tgtgaatt
                                                                    38
<210> 88
<211> 34
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: Primer
<400> 88
gaggcggccg cacttcctga gggctgtgac tggg
                                                                   34
<210> 89
<211> 30
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: Primer
<400> 89
gtcgaattcc cacaagtcca aacagttcag
                                                                   30
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<210> 90
<211> 33
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Primer
<400> 90
actgtcgact taatactgtc cactgctagt ttg
                                                                    33
<210> 91
<211> 11
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: myc epitope
<400> 91
Glu Gln Lys Leu Ile Ser Glu Glu Asp Leu Asn
<210> 92
<211> 8
<212> PRT
<213> Artificial Sequence
<223> Description of Artificial Sequence: Synthetic
      peptide
<400> 92
Asp Pro Lys Lys Lys Arg Lys Val
<210> 93
<211> 6
<212> PRT
<213> Artificial Sequence
<223> Description of Artificial Sequence: Illustrative
      endoplasmic reticulum retention signal
<400> 93
Ser Glu Lys Asp Glu Leu
 1
<210> 94
<211> 6
<212> PRT
<213> Artificial Sequence
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<220>

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<223> Description of Artificial Sequence: 6-His tag
<400> 94
His His His His His
                 5 .
 1
<210> 95
<211> 28
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Synthetic
     oligonucleotide
<400> 95
gaattcccgg ggatccgtcg acctgcag
                                                                28
<210> 96
<211> 15
<212> PRT
<213> Artificial Sequence
<223> Description of Artificial Sequence: Peptide linker
<400> 96
Gly Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser
                                    10
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